SPEAKERS BUREAU

NON-STOCKPILE CHEMICAL MATERIEL PROJECT

PMCD
Program Manager for Chemical Demilitarization

General Information/Project Overview

The Non-Stockpile Chemical Materiel Project (NSCMP), which is under the U.S. Army Program Manager for Chemical Demilitarization (PMCD), was established to provide centralized management and direction to the Department of Defense for the disposal of non-stockpile chemical materiel. Specifically, the Product Manager for Non-Stockpile Chemical Materiel is charged with:

- identifying the type and location of chemical warfare materiel requiring destruction;
- researching, developing, and testing chemical warfare materiel destruction technologies;
- destroying former chemical weapons production facilities and related equipment; and
- supporting the Chemical Weapons Convention Treaty obligations.

Chemical Warfare Materiel Assessment Systems

Mobile Munitions Assessment System

The Mobile Munitions Assessment System (MMAS) is a transportable truck and trailer equipped to analyze and identify the contents of unmarked and unopened munitions. The MMAS greatly reduces risk to the public and emergency response personnel by rapidly obtaining detailed information about discovered chemical weapons and communicating that information to the appropriate authorities and emergency responders. The MMAS uses the Portable Isotopic Neutron Spectroscopy system, as well as a portable x-ray device, to assess conventional and/or chemical-filled munitions. Since its development, several technological upgrades are under research and development and may be added to the MMAS. Two upgrades currently under testing are the Secondary Ion Mass Spectroscopy (SIMS) system, used to detect the presence of chemical agents or chemicals on the munition surface or in the surrounding area (e.g., soil and packing material), and the portable RAMAN system used to identify the contents in glass ampoules and vials.

MMAS

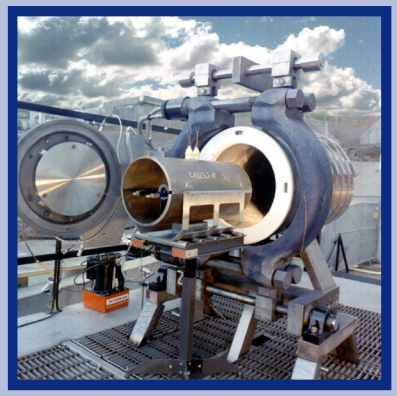
PINS

Portable Isotopic Neutron Spectroscopy

The Portable Isotopic Neutron Spectroscopy (PINS) system is a non-intrusive instrument that analyzes recovered munitions without opening or disturbing them. This portable identification technology allows for the safe handling and analysis of munitions with unknown contents. The PINS system identifies the contents of a munition by measuring reflected gamma rays, which are similar to x-rays. This technology has been used for more than 40 years in geological studies, criminal investigations, analyses of food impurities, and detection of explosives at airports.

Transportable Treatment Systems

The Non-Stockpile Chemical Materiel Project (NSCMP), is researching and developing several transportable systems for the destruction of non-stockpile chemical warfare materiel (CWM). These mobile systems would access and treat chemical agent in non-stockpile CWM and decontaminate the containers and munition bodies. The systems currently under development include the Rapid Response System, the Munitions Management Device, and the Explosive Destruction System.



EDS

Explosive Destruction System

The Explosive Destruction System (EDS) is a transportable system designed to detonate munitions inside a sealed pressure vessel and neutralize chemical agents. The sealed pressure vessel maintains worker and public safety by preventing the release of metal fragments and chemical agent into the environment. The EDS is designed to destroy recovered World War I and World War II munitions such as the 75mm, 4.2-inch, and 8-inch livens. A second version of the EDS, commonly referred to as EDS-2, is under development and will destroy munitions with larger explosive capacities.

Rapid Response System

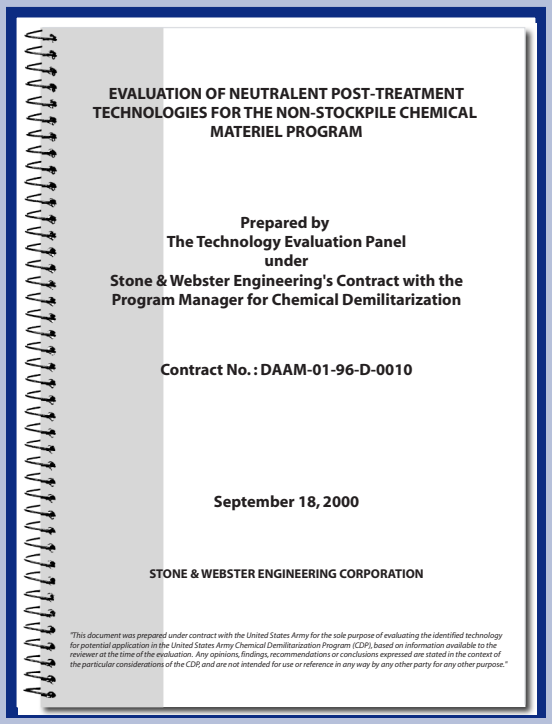
The Rapid Response System (RRS) is a portable treatment system designed to characterize, monitor, repackage, and treat Chemical Agent Identification Sets (CAIS). CAIS were formerly used to train soldiers in the safe handling, identification, and decontamination of chemical warfare agents. The sets consist of chemical agents contained in glass ampoules, vials, and bottles.

RRS

Technology Evaluation Panel

The Non-Stockpile Chemical Materiel Project (NSCMP) has established a program to identify viable treatment alternatives to the incineration of neutralent wastes resulting from the use of the transportable treatment systems. To ensure that the technology evaluation process is unbiased and thoroughly performed, NSCMP has established an independent Technology Evaluation Panel. The panel consists of seven distinguished professionals experienced in technology evaluations for government and industry, accredited with academic credentials in the subjects of Chemistry, Chemical, Mechanical and Environmental Engineering, and five citizens representatives knowledgable in PM chemical demilitarization program.The Technology Evaluation Panel recommended a path forward for the following six technologies

- Catalytic Hydrothermal Conversion Technology
- Gas Phase Chemical Reduction
- Supercritical Water Oxidation
- MGC PLASMOX® Process
- Catalytic Transfer Hydrogenation Technology
- Solvated Electron and Persulfate Oxidation Technologies



EVALUATION OF NEUTRALENT POST-TREATMENT TECHNOLOGIES FOR THE NON-STOCKPILE CHEMICAL MATERIEL PROGRAM

Prepared by
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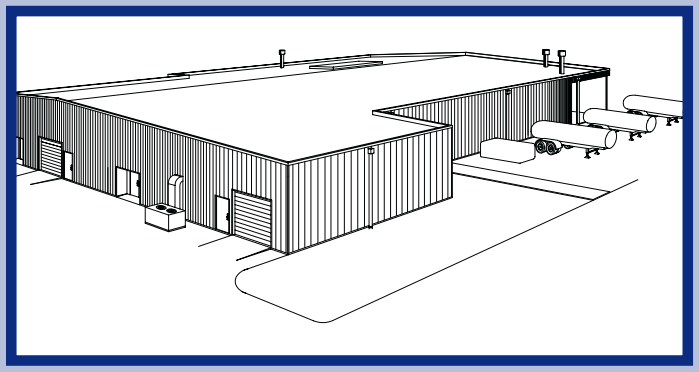
"This document was prepared under contract with the United States Army for the sole purpose of evaluating the identified technology for potential application in the United States Army Chemical Demilitarization Program (CDP), based on information available to the reviewer at the time of the evaluation. Any opinions, findings, recommendations or conclusions expressed are stated in the context of the particular considerations of the CDP, and are not intended for use or reference in any way by any other party for any other purpose."



MAPS

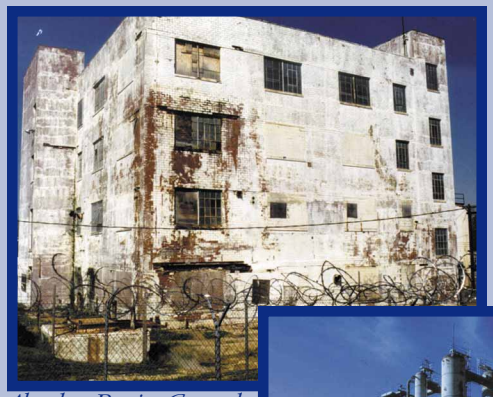
Munitions Assessment and Processing System

The Munitions Assessment and Processing System (MAPS) is a fixed facility to be built on the Aberdeen Proving Ground in Edgewood, Maryland. This facility will be a 152-foot by 106-foot conventional metal structure used to separate chemical agents from explosive munitions. Construction of the facility is slated to begin in late 2001 with a projected completion date of 2004.

Ton Container Recycling Project

The Non-Stockpile Chemical Materiel Project (NSCMP) has recently completed a project that recycled more than 900 empty ton containers (equivalent to approximately 775 tons of steel) previously stored at the Deseret Chemical Depot in Tooele, Utah. The empty ton containers previously stored chemical agent and were used to ship chemical agent in bulk quantities. These containers were thermally decontaminated, then transported to an off-site commercial recycling facility where they were melted into steel ingots. Additional empty ton containers are stored at Umatilla Army Depot in Hermiston, Oregon, and Pine Bluff Arsenal in Pine Bluff, Arkansas.

Ton Containers



Aberdeen Proving Ground

Newport

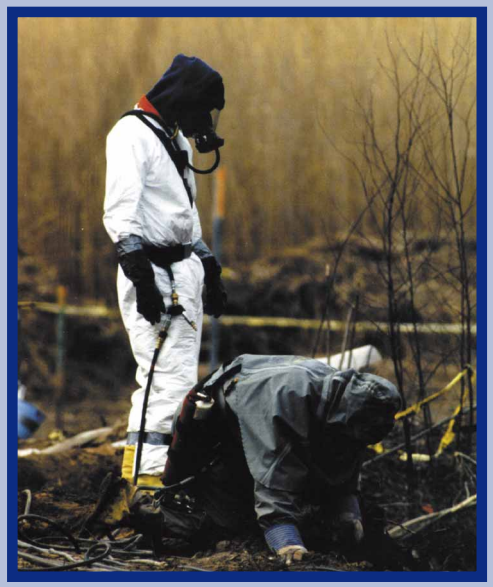
Former Production Facilities

The production of chemical weapons and chemical agents was conducted at various facilities prior to signing of the Chemical Weapons Convention (CWC). These facilities either produced chemical agent, precursors to chemical agents, or were used to assemble chemical weapons. The CWC stipulates that all chemical weapons production facilities that were designed, constructed, or used after January 1, 1946, must be dismantled. NSCMP is responsible for destroying former chemical weapons production facilities at Pine Bluff Arsenal in Arkansas and at the Newport Chemical Depot in Indiana. Other former production facilities are either closed, converted, or are being demolished by other Army organizations. NSCMP completed demolition of the former BZ Munitions Fill Facility at Pine Bluff Arsenal in 1999. The remaining facility, the former Integrated Binary Production Facility, at Pine Bluff Arsenal is scheduled to be demolished by 2007. Demolition of the former production facility at the Aberdeen Proving Ground was completed in February 2000.

Chemical Warfare Materiel Recovery Actions

When suspected recovered chemical warfare materiel is found, specially trained personnel are dispatched to the site to assess the content and condition of the materiel, and determine if it is safe for storage or transportation. Materiel that is unsafe for transportation or storage may be destroyed on site. Recovered chemical warfare materiel is currently stored at:

- Aberdeen Proving Ground, Maryland
- Camp Bullis, Texas
- Deseret Chemical Depot, Utah
- Dugway Proving Ground, Utah
- Fort Richardson, Alaska
- Pine Bluff Arsenal, Arkansas
- Redstone Arsenal, Alabama
- Johnston Island, Pacific Ocean.

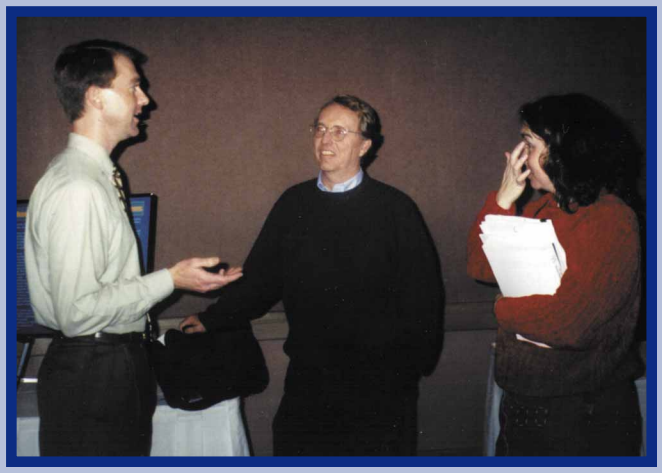


Pine Bluff Initiatives

The Non-Stockpile Chemical Materiel Project is evaluating assessment and disposal alternatives for chemical warfare materiel stored currently at Pine Bluff Arsenal in Arkansas. One of these alternatives include a state-of-the art Munitions Assessment System that will assess the condition of munitions, identify unknown munition contents, and determine the status of explosive components. Another alternative under consideration is the Fixed Facility. The Fixed Facility, currently in the design stage, would be used to safely dispose of a variety of recovered and stored chemical warfare materiel.

Public Outreach

The Non-Stockpile Chemical Materiel Project (NSCMP) is committed to exchanging information with communities adjacent to existing and potential non-stockpile sites, and factoring this information into the technology evaluation process. To achieve this goal, NSCMP employs several tools including availability sessions, round table discussions, and citizens' forums to promote public awareness.



U.S. Army Speakers

To request a speaker for the U.S. Army Non-Stockpile Chemical Materiel Project for the topics discussed in this brochure, please contact the Public Outreach and Information Office: Ms. Louise Dyson at 410-436-3445; Mr. Jeff Lindblad at 410-436-4555; or call 800-488-0648.

NSCMP is working with a cross section of citizens to enhance and ensure positive information exchanges. If you would like more information on the citizens and organizations NSCMP is currently exchanging information with, please contact Ms. Dyson or Mr. Lindblad.

For more information on the Non-Stockpile Chemical Materiel Project, or to be added to the mailing list, please call 1-800-488-0648. Or, you may write to: Program Manager for Chemical Demilitarization, Public Outreach and Information Office, (SFAE-CD-P), Building E4585, Aberdeen Proving Ground, MD 21010-4005.
Or visit our web site at www-pmcd.apgea.army.mil

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